WHAT IS CLAIMED IS:

1. An optical pickup having a first light source for generating an optical beam of a first wavelength, a second light source for generating an optical beam of a second wavelength different from the first wavelength, an optical system for converging the optical beams derived from the two light sources onto an optical disk, and a photodetector for detecting reflected light derived from the optical disk, the optical pickup further comprising:

an optical device for separating the light of the first wavelength and the light of the second wavelength reflected by the optical disk from each other;

a first hologram device for diffracting the light of the first wavelength separated by the optical device so as to make the light incident on the photodetector; and

a second hologram device for diffracting the light of the second wavelength separated by the optical device so as to make the light incident on the photodetector, wherein

at least one of the two hologram devices is a polarization hologram device.

2. The optical pickup according to Claim 1, wherein

the first light source, the second light source, the photodetector, the optical device, the first hologram

device and the second hologram device are integrated into one unit.

3. The optical pickup according to Claim 1, wherein

the optical device is a wavelength-splitting prism which differs in reflectivity depending on wavelength,

the first hologram device diffracts light reflected by the wavelength-splitting prism so as to make the light incident on the photodetector, and

the second hologram device diffracts light transmitted by the wavelength-splitting prism so as to make the light incident on the photodetector.

4. The optical pickup according to Claim 1, wherein

the optical device is a composite polarization beam splitter having characteristics that the composite polarization beam splitter transmits generally all of p-polarized light and reflects generally all of s-polarized light out of the optical beam of the first wavelength while the composite polarization beam splitter transmits generally all of both p-polarized light and s-polarized light out of the optical beam of the second wavelength,

the optical pickup further comprises a 1/4 wavelength plate which rotates a polarization direction of the light of the first wavelength by 90 degrees and which

is disposed between the composite polarization beam splitter and the optical system,

the first hologram device diffracts light reflected by the composite polarization beam splitter so as to make the light incident on the photodetector, and

the second hologram device diffracts light transmitted by the composite polarization beam splitter so as to make the light incident on the photodetector.

5. The optical pickup according to Claim 4, wherein

the 1/4 wavelength plate rotates a polarization direction of light of the second wavelength as well by 90 degrees.

6. The optical pickup according to Claim 5, wherein

the 1/4 wavelength plate is adhesively fixed to a surface of the composite polarization beam splitter confronting the optical system.

7. The optical pickup according to Claim 5, wherein

the first hologram device and the second hologram device are polarization hologram devices which are so set that ±1st-order diffraction efficiency of the s-polarized light and 0th-order diffraction efficiency of the p-polarized light are maximized while 0th-order diffraction efficiency of the s-polarized light and ±1st-order diffraction efficiency of the p-polarized light are minimized.

8. The optical pickup according to Claim 1, wherein

the photodetector includes a divisional photodetection device which is two-divided so as to have two photodetection regions by a parting line extending along a direction corresponding to a radial direction of the optical disk,

meanwhile, the first hologram device and the second hologram device each include one diffraction region resulting from the two-division by the parting line extending along the direction corresponding to the radial direction of the optical disk, and wherein

upon focusing, light diffracted at the one diffraction region out of the optical beam of the first wavelength and the optical beam of the second wavelength forms a light spot on the parting line of the divisional photodetection device.

9. The optical pickup according to Claim 1, wherein

a three-beam diffraction grating is provided between the first, second light sources and the second hologram device.

10. The optical pickup according to Claim 9, wherein

the three-beam diffraction grating is a wavelength-selective diffraction grating which transmits generally all of the optical beam of the first wavelength

and splits the optical beam of the second wavelength into three beams of 0th-order light and ±1st-order light.

11. The optical pickup according to Claim 10, wherein the photodetector is made up of a plurality of photodetection devices which are arrayed in such a manner that a tracking error signal of a differential phase method or a push-pull method can be detected based on light diffracted by the first hologram device and that a tracking error signal of a three-beam method or a differential push-pull method can be detected based on light diffracted by the second hologram device.

12. The optical pickup according to Claim 10, wherein the wavelength-selective diffraction grating is a polarization hologram.

13. The optical pickup according to Claim 10, wherein the wavelength-selective diffraction grating is a hologram adjusted in groove depth.

14. The optical pickup according to Claim 1, wherein the photodetector is made up of a plurality of photodetection devices which are arrayed in such a manner that diffracted light of the optical beam of the second wavelength by the first hologram device is not made incident on the photodetector.

15. The optical pickup according to Claim 1, wherein

the photodetector is made up of a plurality of photodetection devices which are arrayed in such a manner that diffracted light of the optical beam of the first wavelength by the second hologram device is not made incident on the photodetector.

16. The optical pickup according to Claim 1, wherein

the photodetector comprises a first photodetector on which diffracted light from the first hologram device comes incident, and a second photodetector on which diffracted light from the second hologram device comes incident.

17. The optical pickup according to Claim 1, wherein

the first light source is a first semiconductor laser which oscillates on a 650 nm band, and

the second light source is a second semiconductor laser which oscillates on a 780 nm band.

18. The optical pickup according to Claim 17, wherein

at least one of the first semiconductor laser and the second semiconductor laser is a high-power laser, and

recording and reproduction onto the optical disk with the high-power laser is enabled.